
# **Nanoparticle counting and sizing:** Introduction of a new technology

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11:00 – 11:45 AM (CEST)

**For registration, please complete the form available at this link**

## TOPIC / ABSTRACT

In the world of technical dispersions—from CMP slurries to pharmaceuticals—nanoparticles are invisible to the naked eye but have a critical impact on the performance of the end product. The core of the problem is that **conventional ensemble methods such as DLS often only provide statistical averages and "guesswork" curves**. These averages obscure important details such as tiny outliers or starting aggregation, leading to costly mistakes in R&D as well as quality assurance.

**This webinar presents a technological revolution with the LUMiSpoc®: patented Single Particle Light Scattering (SPLS®) technology**. Equipped with a violet 405 nm laser source, the LUMiSpoc is capable of individually detecting the **size and exact number of each particle** – up to a speed of 10,000 particles per second.

Through **hydrodynamic focusing in an exceptional dynamic detection range (≥6 decades)**, the system guarantees stable detection conditions in the nano and micro range. Simultaneous measurement of light scattering in two directions (side scatter and forward scatter) enables:

- **True single particle counting**: Identification of nanomaterials and detection of agglomerates/aggregates.
- **Precise concentration determination**: Measurements with an uncertainty of less than 8% (k=2) – for pure concentration even without knowledge of the refractive index.
- **Physical depth**: Determination of particle size and identification of components/impurities via the refractive index (Mie theory).
- **2D data visualization**: Use scatter plots to identify subpopulations that remain invisible in conventional 1D distributions.

Learn how to bridge the gap between conventional meters and move from statistical estimates to true physical reality.

LUM The NEXT STEP in Dispersion Analysis & Materials Testing

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